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—Henry Orosco
Seabrook Intermediate



JSC Photos by
Mark Sowa



Undersea Adventure

Students examine underwater treasures without getting wet

For two weeks at JSC, more than 5,000 students explored the reefs and marine life of Florida as part of the JASON Project.

This year’s mission, “Voyage VII: Adapting to a Changing Sea,” was downlinked from scientists in Florida to students around the country, including those in JSC’s Teague Auditorium. Using computers at JSC, students joined JASON scientists and “drove” underwater vehicles as they explored marine life off the Florida Keys.

Participants at several interactive sites joined Dr. Robert Ballard, a scientist from the Woods Hole Oceanographic Institution and founder of the JASON Project, in a submarine on an exploration of several interconnected water habitats—the Everglades, Florida Bay, the Florida Keys and relic reefs.

The research team’s role was to study the marine habitats and the stresses placed upon them by human activities, and to make suggestions and predictions for the future. Student investigations included aquatic field investigation, designing visual shark targets, shark tracking research, coral rings and climate change, patchwork quilt exercise and exploring a steel reef.

Three scientific expedition objectives were completed during the two-week expedition. One was an investigation of the natural cycles that will help determine life cycles and adaptation of organisms, climatic change, water flow, nutrient flow and geologic events.

Working with Dr. Jerry Wellington of the University of Houston, JASON Project students mounted an investigation of climate change using the coral reefs. Corals, like trees, produce growth rings. The girth of each ring indicates the amount of growth in a year, providing researchers a history of climate change. The researchers will use the historical record to determine whether human activities affect those changes for the reefs, which provide habitats and food for the aquatic organisms in that area.

“I was one of the controllers,” said Henry Orosco from Seabrook Intermediate. “You’re actually learning about some place most people can’t go and survive. You learn interesting things about things you didn’t know like tiny organisms and bacteria.”

Students also were asked to help

identify parts of a human-made steel reef. Scientists believe that the steel reef is a barge called the Vitric that capsized and sank on March 29, 1944, while carrying molasses from New Jersey to Florida.

“We were doing this project during this semester,” said Brandy Smith from Elrod Elementary in Houston. “Our teacher brought up this story and we got excited with it and we started making these little submarines where you blow air into this straw to power them.”

Students also designed targets to attract sharks in the Florida waters. They first researched sharks and their sensory systems and planned designs based on the sharks’ ability to distinguish different shapes, colors and degrees of brightness. Next, they developed shark plots to look for patterns in their activities.

Students also monitored crocodile nesting and hatching success.

Other investigations included the study of corals, fish, and shelf science. Students interacted with sci-



entists in the only operational undersea habitat—the National Undersea Research Programs’ *Aquarius* laboratory—deployed at Conch Reef off Key Largo, Fla. *Aquarius* provides scientists with capabilities in a comfortable living environment underwater. A crew of six averages stays of seven days at an operating depth of 55-120 feet.

The goal of the JASON Project is to engage and excite students in science and technology. Prior to participating in the JASON Project, local teachers attended a training course held at JSC. Teachers were given a JASON curriculum guide with suggested lesson plans designed to complement expedition activities and to increase student awareness and interest in science.

The JASON Foundation for Education is supported by public, private and non-profit organizations including the EDS Corporation, Bechtel Group Inc., the National Geographic Society, the United States Department of Education and NASA.

“I was controlling all the questions and the video,” said Scott Pensyl, from Seabrook Intermediate. “It was really a lot of fun. I’ve come here for three years now. Next year’s project should be a lot different. I’ve dealt with the volcanoes, two underwater projects, and now it’s going to be Iceland. So it’s going to be really different and exciting.” □

Top to bottom, left to right:

- 1) Lori Wheaton of JSC’s Education Team helps Joseph Zerwas, left, and Anna Brewer of Calvary Episcopal School in Richmond, Texas, work on one of the computers tracking the JASON Project.
- 2) Travis Jackson of Hartsfield Elementary School records his question with the help of Wheaton and JSC Teacher Resource Center coordinator Leroy Jackson as JASON activities are shown on the large screens of Teague Auditorium.
- 3) Divers clean the windows on the *Aquarius* undersea laboratory.
- 4) Trilce Marquez records her question as Wheaton and teammate Gordon Eskridge, both of Oklahoma State University, look on.
- 5) Marquez, of Challenger Elementary, Pearland, has her image captured.
- 6) The submarine Nuclear Research-1 supports the JASON Project off the Florida Keys.